Contents

Preface vii
Desorption of n-nonane from microporous carbons
P.J.M. Carrott, F.C. Drummond, M.B. Kenny, R.A. Roberts and K.S.W. Sing (Uxbridge, United Kingdom) 1
Adsorption potential and the mutual interaction potential between adsorbates: Rare gases in the pore of ferrierite
T. Takaishi and M. Kato (Toyohashi, Japan) 15
Heats of adsorption of water on hydrophobic zeolites
K. Tsutsumi and K. Mizoe (Toyohashi, Japan) 29
Thermal decomposition and pore formation of cobalt oxide hydroxide ($HCoO_2$)
S. Kittaka, N. Uchida, I. Miyashita and T. Wakayama (Okayama, Japan) 39
Micropore formation due to thermal decomposition of magnesium hydroxide
H. Naono (Nishinomiya, Japan) 55
Surface characterization of ultramicro spherical particles of silica prepared by W/O microemulsion method
H. Yamauchi, T. Ishikawa and S. Kondo (Osaka, Japan) 71
Infrared study on SO_2 chemisorption activity of crystallite-size controlled γ-FeOOH
A. Matsumoto and K. Kaneko (Chiba, Japan) 81
Hysteresis in nitrogen sorption and mercury porosimetry on mesoporous model adsorbents made of aggregated monodisperse silica spheres
H. Giesche (Potsdam, NY, U.S.A.), K.K. Unger, U. Müller and U. Esser (Mainz, F.R.G.) 93
Effect of temperature on micropore filling of supercritical NO on Fe_2O_3-dispersed activated carbon fibers
K. Kaneko (Chiba, Japan) 115
Mechanism of hydrogen adsorption-induced optical density changes in metal-loaded titania
M. Komiyama and Y. Ogino (Sendai, Japan) 125
Aggregate structures of samples of the disperse dye, C.I. Disperse Blue 79
R.R. Mather (Netherdale, United Kingdom) 131
Use of volcanic-ash-derived soil as iron oxide supported catalysts
M. Escudey and S.A. Moya (Santiago, Chile) 141
Adsorption structure of CO on Pd(111) films and measurement of desorption energy of CO from the films
Y. Gotoh (Chiba, Japan) and R.W. Vook (Syracuse, NY, U.S.A.) 149
The effects of the fractal geometry of surfaces on the adsorption conformation of polymers at monolayer coverage. Part I. The case of polystyrene
D. Farin and D. Avnir (Jerusalem, Israel) 155
Statistical mechanical evaluation of surface area from physical adsorption of gases
E.L. Fuller, Jr and J.B. Condon (Oak Ridge, TN, U.S.A.) 171
A new description of micropore filling and its application for characterizing microporous solids
M. Jaroniec (Lublin, Poland) and J. Choma (Warsaw, Poland) 183
Discrimination between physical and chemical adsorption of ions on oxides
J. Lyklema (Wageningen, The Netherlands) 197
Application of the pressure-jump method to adsorption–desorption kinetics: Adsorption–desorption of the lithium ion on the carboxymethyl group of Sephadex C-25(Li)
K. Hachiya (Okayama, Japan), T. Yasunaga (Osaka, Japan) and K. Takeda (Okayama, Japan) 205
Adsorption characteristics of organic compounds dissolved in water on surface-improved activated carbon fibres
Y. Kaneko (Kanagawa, Japan), M. Abe and K. Ogino (Chiba, Japan) 211
Adsorption of non-ionic surfactants from aqueous solutions on graphite: Adsorption isotherms and calorimetric enthalpies of displacement for C_8E_4 and related compounds
G.H. Findenegg, B. Pasucha and H. Strunk (Bochum, F.R.G.) 223

Ethylxanthate adsorption onto galena and sphalerite
M. Arnaud, S. Partyka (Montpellier, France) and J.M. Cases (Vandoeuvre, France) 235
In-situ investigation of adsorbed surfactants and polymers on solids in solution
P. Somasundaran and J.T. Kunjappu (New York, NY, U.S.A.) 245
An experimental study of the adsorption mechanisms of aqueous organic acids on porous aluminas. 1. The porosity of the adsorbent: A determining factor for the adsorption mechanisms
F. Thomas, J.Y. Bottero and J.M. Cases (Vandoeuvre, France) 269
An experimental study of the adsorption mechanisms of aqueous organic acids on porous aluminas. 2. Electrochemical modelling of salicylate adsorption
F. Thomas, J.Y. Bottero and J.M. Cases (Vandoeuvre, France) 281
Adsorption of anionic surfactants on alumina: Complementarity of the information provided by batch and liquid flow microcalorimetry
R. Denoyel, F. Rouquerol and J. Rouquerol (Marseille, France) 295
A new microcalorimeter for the study of solutions, adsorption and suspensions
S. Partyka, E. Keh, M. Lindheimer (Montpellier, France) and A. Groszek (London, United Kingdom) 309
Adsorption of polybutadienes with polar group terminations on the solid surface. II. Molecular weight dependence
M. Kawaguchi, H. Hanai, A. Takahashi (Mie, Japan), N. Nagata and A. Yoshioka (Kanagawa, Japan) 319
Interaction between poly-L-lysine and synthetic chrysotile asbestos
S. Ozeki, Y. Oowaki and K. Kaneko (Chiba, Japan) 329
Lysozyme on apatites: A model of protein adsorption controlled by electrostatic interactions
A. Barroug, J. Lemaitre and P.G. Rouxhet (Louvain-la-Neuve, Belgium) 339
Effect of adsorption of glycosaminoglycans on the dissolution properties of hydroxyapatite
H. Tanaka, T. Arai, K. Miyajima (Kyoto, Japan), S. Shimabayashi (Tokushima, Japan) and M. Nakagaki (Tokyo, Japan) 357
Affinity separation by the combined process of batch adsorption and fixed bed elution
B.-L. Yang, M. Goto and S. Goto (Nagoya, Japan) 369
The effect of molecular weight and hydrophilic groups on the adsorption behavior of polymers onto magnetic particles
K. Nakamae, S. Tanigawa, S. Nakano and K. Sumiya (Nada Kobe, Japan) 379
Measurement and prediction of adsorption equilibria of organic solutes from dilute aqueous solutions on activated carbon
K. Fukuchi (Ube, Japan) and Y. Arai (Fukuoka, Japan) 387

Author Index 395
Subject Index 397